

ABSTRACT

A method of making a composite material includes at least one each of amphiphilic and polymer components. It includes providing a mixture of at least one each of polymer and amphiphilic compound in a volatile solvent or solvent mixture and providing a phase diagram of the chemical system describing how the components of the chemical system interact in thermodynamic stable phases as a function of temperature, concentration and pressure. The polymer should be a homopolymer, a random block copolymer or a mixture thereof, preferably biodegradable. The amphiphilic compound can form a bilayer-containing phase. The solvent is removed from the mixture by a process selected from the phase diagram considering the desired final composite material, whereby a material is formed. The composite material is useful for applications such as encapsulation of therapeutically active components or for applications such as surface coating.